

T E N N E S S E E CAREERS[®]



Career Cluster Guide

2008-2009

Four Steps to Career Success

About the Information Technology Career Cluster

Designing, developing, managing, and supporting hardware, software, multimedia, and systems integration services.

GET STARTED TODAY!

1

Assess Yourself

Identify your strengths. Then compare them with job expectations in favorite fields.

2

Check the Labor Market

See how a specific occupation fares in Tennessee. Turn to pages 4-7.

3

Find Schools and Educational Programs

Find information on education, training, financial aid, and licensing. See pages 8-11.

4

Find Employers and Job Openings

Check out the Web sites below or visit your local career centers to find out about opportunities in Tennessee.

Free Online Resources to Explore Careers

Tennessee Career Information Delivery System (TCIDS): <http://tcids.tbr.edu/>

KUDER Tennessee College and Career Planning System prepared by edamerica:

<http://www.planningyourdreams.org/>

Tennessee Department of Labor and Workforce Development:

Education, Wages, Jobs and More: <http://www.sourcetn.org>

Youth pages: <http://state.tn.us/labor-wfd/youth>

Career Center locations: <http://www.state.tn.us/labor-wfd/cc/>

Tennessee Department of Education, Career and Technical Education: <http://www.tennessee.gov/education/cte/>

Online Tennessee Board of Regents ROCC Virtual Career Center: <http://careers.rodop.org/>

College for TN, powered by xap: <http://www.collegefortn.org/>

SECONDARY PROGRAMS OF STUDY*	Specific Occupations
Networking Systems	<ul style="list-style-type: none"> • Network Systems and Computer Systems Administrators • Network Systems and Data Communications Analysts
Interactive Multimedia	<ul style="list-style-type: none"> • Multimedia Artists and Animators
Electronic Publishing	<ul style="list-style-type: none"> • Desktop Publishers
Web Design	<ul style="list-style-type: none"> • Computer and Information Scientists, Research • Computer and Information Systems Managers • Computer Programmers • Computer Software Engineers, Applications • Computer Software Engineers, Systems Software • Computer Specialists, All Others • Computer Support Specialists • Computer Systems Analysts • Database Administrators



Tennessee
Programs of Study
 *<http://pathways.tbr.edu>

Information Technology Jobs in Tennessee

Title	Basic Description	Projected Total 2014 Employment	
Source: See footnote #2.	Source: See footnote #2.	Source: See footnote #1.	
Computer and Information Scientists, Research	Research fundamental computer and information science as theorists, designers, or inventors. Solve or develop solutions to problems in the field of computer hardware and software.	270	
Computer and Information Systems Managers	Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.	6,850	
Computer Programmers	Convert project specifications and statements of problems and procedures to detailed logical flow charts for coding into computer language. Develop and write computer programs.	8,900	
Computer Software Engineers, Applications	Develop, create, and modify general computer applications software or specialized utility programs. Analyze user needs and develop software solutions. Design or customize software for client use.	4,640	
Computer Software Engineers, Systems Software	Research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications.	4,270	
Computer Specialists, All Others	All computer specialists not listed separately.	1,020	

1. Estimated wage and employment data are from the Tennessee Department of Labor and Workforce Development, Employment Security Research and Statistics Division (www.sourcectn.org).
2. Job titles and common descriptions are from the Bureau of Labor Statistics, U.S. Department of Labor, Standard Occupational Classification System (<http://www.bls.gov/soc>).

High Skill - High Wage - In Demand

Projected Number of New Jobs, 2004-2014	Annual Median Wage	Most Common Education/Training	Suggested Programs of Study	High Skill	High Wage	In Demand
Source: See footnote #1.		Source: See footnote #1.		See footnote #3.		Source: See footnote #1.
30	\$80,539	Doctoral Degree	Computer and Information Sciences, General; Computer and Information Sciences, Other; Computer Science Computer Systems Analysis; Information Sciences and Systems	●	●	●
1,590	\$74,650	Work experience, plus Bachelor's Degree	Business Computer Programming/ Programmer; Business Systems Networking and Telecommunications; Computer and Information Sciences, General; Computer Science Information Sciences and Systems; Management Information Systems and Business Data Processing	●	●	●
560	\$58,816	Bachelor's Degree	Business Computer Programmer; Computer Programming; Management Information Systems and Business Data Processing	●	●	●
1,550	\$65,583	Bachelor's Degree	Computer Science	●	●	●
1,540	\$67,069	Bachelor's Degree	Computer Science Information Sciences and Systems	●	●	●
180	\$60,109	Associate Degree	Business Information and Data Processing Services, Other; Business Systems Networking and Telecommunications; Computer and Information Sciences, General; Computer and Information Sciences, Other Computer Science; Data Processing Technologist/ Technician Information Sciences and Systems	●	●	●

3. The suggested programs of study are postsecondary programs.

For updated career information go to
<http://www.sourcetn.org>.

Information Technology Jobs in Tennessee

Title	Basic Description	Projected Total 2014 Employment	
Source: See footnote #2.	Source: See footnote #2.	Source: See footnote #1.	
Computer Support Specialists	Provide technical assistance to computer system users. Answer questions or resolve computer problems for clients in person, via telephone or from a remote location.	10,210	
Computer Systems Analysts	Analyze science, engineering, business, and all other data processing problems for application to electronic data processing systems. Analyze user requirements, procedures, and problems to automate or improve existing systems.	9,120	
Database Administrators	Coordinate changes to computer databases, and test and implement the database by applying knowledge of database management systems. May plan, coordinate, and implement security measures to safeguard computer databases.	2,180	
Multimedia Artists and Animators	Create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in products or creations, such as computer games, movies, music videos, and commercials.	570	
Network and Computer Systems Administrators	Install, configure, and support an organization's local area network (LAN), wide area network (WAN), and Internet system or a segment of a network system. Maintain network hardware and software.	5,650	
Network Systems and Data Communications Analysts	Analyze, design, test, and evaluate network systems, such as local area networks (LAN), wide area networks (WAN), Internet, intranet, and other data communications systems. Perform network modeling, analysis, and planning.	4,410	

1. Estimated wage and employment data are from the Tennessee Department of Labor and Workforce Development, Employment Security Research and Statistics Division (www.sourcectn.org).
2. Job titles and common descriptions are from the Bureau of Labor Statistics, U.S. Department of Labor, Standard Occupational Classification System (<http://www.bls.gov/soc>).

High Skill - High Wage - In Demand

Projected Number of New Jobs, 2004-2014	Annual Median Wage	Most Common Education/Training	Suggested Programs of Study	High Skill	High Wage	In Demand
Source: See footnote #1.		Source: See footnote #1.		Source: See footnote #1.		
1,950	\$40,536	Associate Degree	Business Systems Networking and Telecommunications; Data Processing Technologist/Technician	●	●	●
2,400	\$59,746	Bachelor's Degree	Computer and Information Sciences, General; Computer Systems Analysis	●	●	●
730	\$62,914	Bachelor's Degree	Computer and Information Sciences, General; Computer Systems Analysis; Management Information Systems and Business Data Processing	●	●	●
80	\$45,204	Bachelor's Degree	Art, General	●	●	●
1,780	\$57,660	Bachelor's Degree	Business Systems Networking and Telecommunications; Computer and Information Sciences, General; Computer and Information Sciences, Other; Computer Systems Analysis; Information Sciences and Systems	●	●	●
1,720	\$56,590	Bachelor's Degree	Business Information and Data Processing Services, Other; Business Systems Networking and Telecommunications; Computer and Information Sciences, General; Computer and Information Sciences, Other; Computer Science; Computer Systems Analysis; Data Processing Technologist/Technician Information Sciences and Systems	●	●	●

3. The suggested programs of study are postsecondary programs.

For updated career information go to
<http://www.sourcetn.org>.

PROGRAMS OF STUDY TENNESSEE TECHNOLOGY CENTERS, COLLEGES & UNIVERSITIES									
	Austin Peay State University www.apsu.edu	Chattanooga State Technical Community College www.chattanoogastate.edu	Cleveland State Community College www.clsc.cc.tn.us	Columbia State Community College www.columbiastate.edu	Dyersburg State Community College www.dscc.cc.tn.us	East Tennessee State University www.etsu.edu	Jackson State Community College www.jscc.cc.tn.us	Middle Tennessee State University www.mtsu.edu	
Information Technology Majors									
Animation, Interactive Technology, Video Graphics and Special Effects						B			
Business Information and Data Processing Services, Other									
Computer and Information Sciences, General	B					B, M			
Computer and Information Systems Security									
Computer Graphics									
Computer Operations Technology									
Computer Programming, Specific Applications					C				
Computer Programming, Vendor/Product Certification									
Computer Science								B, M	
Computer Systems Networking and Telecommunications									
Computer Technology/Computer Systems Technology									
Computer/Information Technology Services Administration									
Information Sciences and Systems					C, A				
Management Information Systems and Business Data Processing, General		C, A		A			A	B	
Web Page, Digital/Multimedia and Information Resource		C, A	C, A	C, A	C, A		C, A		
C = Postsecondary Awards/Certificates/Diplomas A = Associate Degree B = Bachelor's Degree									
M = Master's Degree D = Doctoral Degree									
This chart was based upon the best available information and is intended only to serve as a general guide for educational opportunities. Department names for programs vary among schools. Refer to related cluster booklets for other possible programs. Community Colleges (www.tbr.state.tn.us/campuses.htm) offer University Parallel Programs, which may also offer opportunities for study in this field. Contact the schools' academic departments or your school advisor for current programs and degrees: www.tbr.state.tn.us/campuses.htm and http://www.tennessee.edu/ .									
For financial aid information, go to the Tennessee Student Assistance Corporation, http://Tennessee.gov/tsac/about_us.htm , or The Source, www.sourcetn.org (Services for Individuals, Education Services, Financial Aid).									

	Motlow State Community College www.mscc.cc.tn.us	Nashville State Community College www.nscoc.edu	Northeast State Technical Community College www.nstcc.cc.tn.us	Pellissippi State Technical Community College www.pstcc.cc.tn.us	Roane State Community College www.rscoc.cc.tn.us	Southwest Tennessee Community College www.southwest.tn.edu/	Tennessee Technology Center at Jacksboro www.jacksboro.tec.tn.us/	Tennessee Technology Center at Knoxville www.knoxville.tec.tn.us/	Tennessee Technology Center at Nashville www.nashville.tec.tn.us/	Tennessee Technology Center at Shelbyville www.shelbyville.tec.tn.us/
			A	A	C					
							C			
										C
						C				
			C							
		A	C	A						
		A								
				A						
		A				A		C	C	
	C, A	C, A	C, A	C, A	C, A	C, A				



PROGRAMS OF STUDY

TENNESSEE TECHNOLOGY CENTERS, COLLEGES & UNIVERSITIES

Information Technology Majors

Tennessee State University
www.tnstate.edu

Tennessee Technological University
www.intech.edu

The University of Memphis
www.memphis.edu

University of Tennessee at Chattanooga
www.utc.edu

University of Tennessee at Knoxville
www.utk.edu

University of Tennessee at Martin
www.utm.edu

Volunteer State Community College
www.vsc.cc.tn.us

Walters State Community College
www.wsc.cc.tn.us

Animation, Interactive Technology,
Video Graphics and Special Effects

Business Information and Data
Processing Services, Other

Computer and Information Sciences,
General

Computer and Information Systems
Security

Computer Graphics

Computer Operations Technology

Computer Programming, Specific
Applications

Computer Programming,
Vendor/Product Certification

Computer Science

Computer Systems Networking and
Telecommunications

Computer Technology/Computer
Systems Technology

Computer/Information Technology
Services Administration

Information Sciences and Systems

Management Information Systems and
Business Data Processing, General

Web Page, Digital/Multimedia and
Information Resource

B

B, M

B, M, D

B, M

B, M, D

B

A

S

S

M

B

B

S

C, A

C, A


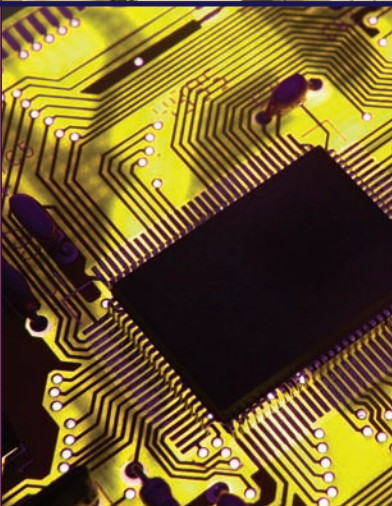

C = Postsecondary Awards/Certificates/Diplomas
A = Associate Degree
B = Bachelor's Degree

M = Master's Degree
D = Doctoral Degree
S = Special Postbaccalaureate

This chart was based upon the best available information and is intended only to serve as a general guide for educational opportunities. Department names for programs vary among schools. Refer to related cluster booklets for other possible programs. Community Colleges (www.tbr.state.tn.us/campuses.htm) offer University Parallel Programs, which may also offer opportunities for study in this field. Contact the schools' academic departments or your school advisor for current programs and degrees: www.tbr.state.tn.us/campuses.htm and <http://www.tennessee.edu/>.

For financial aid information, go to the Tennessee Student Assistance Corporation, http://Tennessee.gov/tsac/about_us.htm, or The Source, www.sourcetn.org (Services for Individuals, Education Services, Financial Aid).

Tennessee Licensed Occupations

Job Titles and Licenses	Contacts
<p>Computer Software Engineers, Applications Computer Software Engineers, Systems Software Alarm System Contractor Qualifying Agent</p>	 <p>Board for Licensing Alarm Systems Contractors Division of Regulatory Boards Department of Commerce and Insurance Davy Crockett Tower, 2nd Floor 500 James Robertson Pkwy. Nashville, TN 37243 (615) 741-9771</p>
<p>Computer Software Engineers, Applications Computer Software Engineers, Systems Software Engineer Engineer Intern</p>	 <p>Board of Architectural & Engineering Examiners Division of Regulatory Boards Department of Commerce and Insurance Davy Crockett Tower, 3rd Floor 500 James Robertson Pkwy. Nashville, TN 37243 (615) 741-3221</p>
	

For more information on licensing requirements, go to the Tennessee Department of Commerce and Insurance,
<http://www.tennessee.gov/commerce/>.



Discover your talents

Tennessee Career Information Delivery System (TCIDS): <http://tcids.tbr.edu/>
The Source: <http://www.sourcetn.org>

Notice

The Tennessee Career Cluster Guides and accompanying Planning Guide are publications of the Tennessee Department of Education. Information contained herein is provided as a public service. While every attempt has been made to provide accurate information, there is no guarantee of the completeness or accuracy of the information provided. There is no promise or warranty that the agencies involved will continue to provide or update information. This service may be suspended or discontinued at any time. The user assumes the responsibility of verifying any information used or relied upon.

For more information on Career clusters:
<http://www.tennessee.gov/education/cte>

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Lesley D. Farmer, Esq., Director
Office for Civil Rights
Tennessee Department of Education
710 James Robertson Parkway, 6th Floor
Nashville, TN 37243-0383
Tel. (615) 253-1550



States' Career Clusters Initiative
www.careerclusters.org

